

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A friction material comprising a fibrous base material impregnated with at least one curable resin, the fibrous base material comprising a porous primary layer and a secondary layer, the porous primary layer comprising less fibrillated aramid fibers having a freeness of greater than 300 on the Canadian Standard Freeness index, a silica filler material, synthetic graphite particles, and at least one of cotton fibers or carbon fibers, the secondary layer comprising a mixture of carbonaceous material and silica friction modifying particles on at least one surface of the primary layer, wherein the silica friction modifying particles have an average size ranging from about 0.5 to about 20 microns, and wherein the carbonaceous material comprises at least one of carbon fibers having an average length that ranges from about 0.5 to about 6 mm, or carbon particles having an average diameter that ranges in size from about 1 to about 80 μm .
2. (Previously Presented) The friction material of claim 1, wherein the secondary layer comprises about 5% to about 35%, by weight, of the mixture of carbonaceous material and silica friction modifying particles, based on the weight of the fibrous base material.
3. (Original) The friction material of claim 1 wherein the secondary layer comprises a mixture of carbon particles and silica particles.
4. (Currently Amended) The friction material of claim 3, wherein the mixture of carbon particles ~~carbonaceous material~~ and silica friction modifying particles is present at about 0.2 to about 20%, by weight, based on the weight of the fibrous base material, the mixture of carbon particles ~~carbonaceous material~~ and silica friction modifying particles covering about 3% to about 30% of the surface area of the primary layer.

5. (Currently Amended) The friction material of claim 3, wherein the secondary layer comprises about 20% to about 35%, by weight, of silica particles, and about 65% to about 80%, by weight, of carbon particles, based on the total weight of the mixture of carbon particles and silica friction-modifying particles.
6. (Canceled)
7. (Currently Amended) The friction material of claim 3, wherein the secondary layer comprises a mixture of i) diatomaceous earth particles and ii) fully carbonized carbon particles or partially carbonized carbon particles, and mixtures thereof.
8. (Original) The friction material of claim 1, wherein the fibrous base material defines pore diameters ranging in mean average size from about 2.0 to about 25 microns.
9. (Original) The friction material of claim 1, wherein the primary layer has readily available air voids of at least about 50%.
10. (Canceled)
11. (Currently Amended) The friction material of claim 1 [[10]], wherein the less fibrillated aramid fibers have a freeness of about 350 to about 650 on the Canadian Standard Freeness index.
12. (Currently Amended) The friction material of claim 1 [[10]], wherein the less fibrillated aramid fibers have average fiber lengths in the range of about 0.5 to about 10 mm.
13. (Currently Amended) The friction material of claim 1 [[10]], wherein the silica filler material comprises diatomaceous earth.
14. (Currently Amended) The friction material of claim 1 [[10]], wherein the ~~fibrous base~~ porous primary layer comprises about 50 to about 60% [[6%]], by weight, less fibrillated aramid fibers; about 40 to about 10%, by weight, cotton fibers; about 5-15%, by weight, carbon fibers; about 20 to about 30%, by weight, synthetic graphite particles; and, about 5 to about 15%, by weight, silica filler material.

15. (Original) The friction material of claim 1, impregnated at about 35 to about 40% resin, by weight, with at least one of: a phenolic resin, a modified phenolic resin, or a mixture of a phenolic resin and a silicone resin wherein the amount of silicone resin in the mixture ranges from approximately 5 to approximately 80%, by weight, based on the weight of the mixture wherein the phenolic resin is present in a solvent material and the silicone resin is present in a solvent material which is compatible with the solvent material of the phenolic resin.
16. (Canceled)
17. (Currently Amended) The friction material of claim 1 [[16]], wherein the less fibrillated aramid fibers have a freeness of about 430 to about 650 on the Canadian Standard Freeness index.
18. (Canceled)
19. (Currently Amended) The friction material of claim 1 [[16]], wherein the ~~fibrous base~~ porous primary layer comprises about 50 to about 60%, by weight, less fibrillated aramid fibers; about 5 to about 20%, by weight, carbon fibers; about 20 to about 30%, by weight, synthetic graphite particles; and, about 3 to about 15%, by weight, silica filler material.
20. (Currently Amended) A process for producing a friction material comprising:
forming a porous primary layer ~~fibrous base material~~ comprising less fibrillated aramid fibers having a freeness of greater than 300 on the Canadian Standard Freeness index, a silica filler material, synthetic graphite particles, and at least one of cotton fibers or carbon fibers,
coating about 3% to about 90% [[30%]] of at least one surface of the porous primary layer ~~fibrous base material~~ with a mixture of carbonaceous material and silica friction modifying particles to form a fibrous base material, the mixture of carbonaceous material and silica friction modifying particles being present at about 0.2 to about 20%, by weight, based on the weight of the fibrous base material, and
impregnating the ~~coated~~ fibrous base material with a phenolic resin, phenolic-based or a phenolic-silicone resin mixture, and thereafter curing the impregnated fibrous base material at a predetermined temperature for a predetermined period of time.

21. (Canceled)

22. (Currently Amended) The process of claim 20 ~~[[21]]~~, wherein the porous primary layer ~~fibrous base material~~ comprises, by weight, about 40 to about 60% a plurality of less fibrillated aramid fibers, having a freeness of at least about 300 on the Canadian Standard Freeness (CSF) index, and optionally one or more of the following: cotton fibers, carbon fibers, carbon particles, and, at least one filler material about 5 to about 20% carbon fibers, about 10 to about 20% cotton fibers, about 3 to about 15% silica filler material, and further comprises about 3 to about 15% carbon particles and about 0 to about 3% of a latex material.

23. (Currently Amended) The process of claim 22, wherein the porous primary layer in which the fibrous base material comprises a plurality of less fibrillated aramid fibers having a freeness of at least about 430 to about 650 on the Canadian Standard Freeness (CSF) index.

24. (New) The process of claim 20, wherein the carbonaceous material comprises carbon fibers having an average length that ranges from about 0.5 to about 6 mm and an average diameter that ranges from about 1 to about 15 μm .

25. (New) The friction material of claim 1, wherein the porous primary layer comprises about 20% to about 40%, by weight, of synthetic graphite particles.

26. (New) The friction material of claim 1, wherein the carbonaceous material comprises fully carbonized carbon fibers or partially carbonized carbon fibers that have an average length that ranges from about 0.5 to about 6 mm and an average diameter that ranges from about 1 to about 15 μm .

27. (New) A fibrous base material impregnated with at least one curable resin, the fibrous base material comprising a porous primary layer and a secondary layer comprising a mixture of carbon particles and silica friction modifying particles on at least one surface of the primary layer, wherein the carbon particles have an average diameter that ranges in size from about 1 to about 80 μm and the silica friction modifying particles have an average size ranging from about 0.5 to about 20 μm , wherein the mixture of carbon particles and silica friction modifying

particles is present at about 0.2 to about 20%, by weight, based on the weight of the fibrous base material, and wherein the secondary layer comprises about 20% to about 35%, by weight, of silica particles, and about 65% to about 80%, by weight, of carbon particles, based on the total weight of the mixture of carbon particles and silica particles.